

ESTHnewsletter

environment science technology health **Rome, Italy**

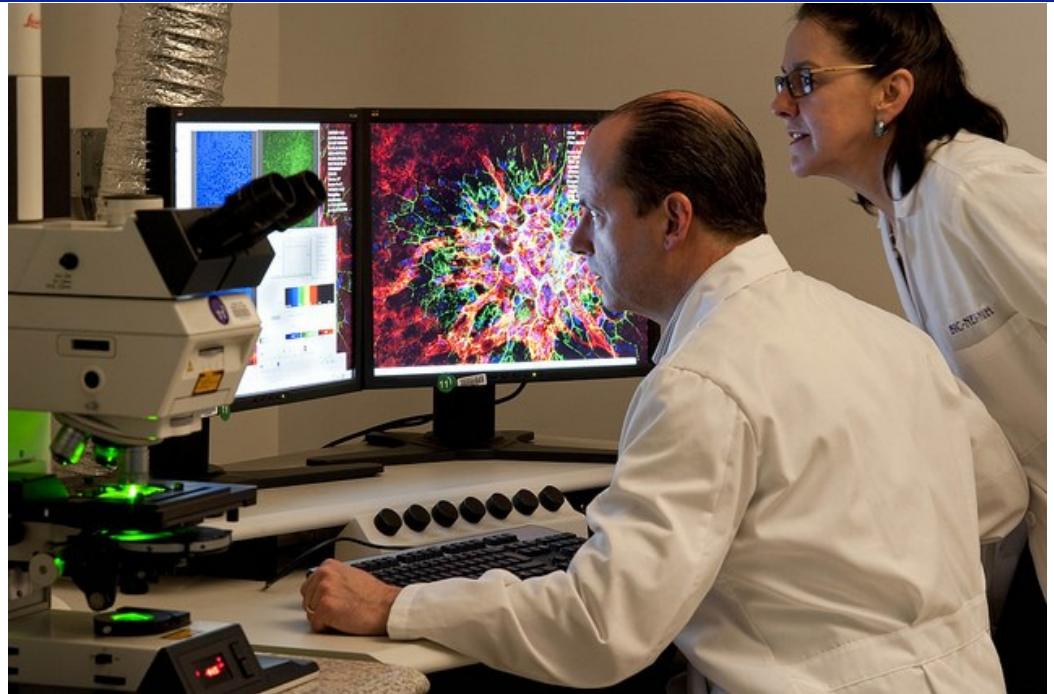
IN THIS ISSUE :

Partner Spotlight.....	1
Visits.....	2
Natural Parks.....	3
Environment & Science...4-6	
Conferences.....	7-8
Activities.....	9-11
Look Ahead.....	12



Meet your ESTH Rome team:
(L to R): Caron, Fede, Kristin,
Lee

Caron De Mars,
ESTH Counselor
Federica Signoretti,
ESTH Specialist
Michael Lee,
Office Management Specialist
Kristin Williams,
Spring '17 Intern



Researchers looking at a cell from a microscope. Credit: [NIH Flickr](#)

Partner Spotlight: **National Institutes of Health (NIH)**

Italian researchers, mainly from Italy's distinguished academic research community, were valuable partners in 175 active research projects supported by the National Institutes of Health (NIH) in 2016. Eighteen of NIH's 27 institutes and centers funded such projects between U.S. principal investigators in collaboration with Italian counterparts. NIH and Italian scientists made an historic breakthrough by developing a nasal test for diagnosing Creutzfeldt-Jakob disease (CJD: a human form of mad cow disease), a fatal neurodegenerative disorder. Previously, diagnoses

of CJD were done posthumously or by an invasive brain biopsy on living patients. However, with this breakthrough procedure, diagnosis is done by a far less invasive nasal test that detects prion molecule abnormalities. CJD affects one in one million people worldwide each year. This nasal test will also be able to help doctors differentiate between prion diseases, like CJD, and other brain diseases. For more information on this study, please click [here](#).



NASA Rep Tim Tawney Visits Rome

On Dec. 12, ESTH organized the first official trip to Rome of Tim Tawney, appointed as National Aeronautics and Space Administration (NASA) Europe Representative in August 2016. He is based at the U.S. Embassy in Paris and represents NASA to all of the space agencies of Europe. Italy, one of NASA's strongest partners in Europe, is the third largest contributor to the European Space Agency (ESA), and maintains a robust national space program, which includes significant bilateral cooperation with NASA. Italy strongly supports the December 2016 ESA Ministerial approval of the extension of International Space Station operations until 2024, and is also interested in collaborating with NASA's initiative to advance the new technologies and spaceflight experience needed for a human mission to Mars in the 2030s. Tim Tawney met with Embassy Rome's Deputy Chief of Mission and other senior Embassy officers, in addition to officials from the Italian Space Agency (ASI), including ASI President Roberto Battiston. Also noteworthy is the recent agreement in principle between NASA and ASI to send an Italian Corner Cube Retroreflector on NASA's Mars2020 Rover, which will look for evidence of past life on the planet; and likely also on the Mars InSight lander, a mission that will study Mars' deep interior.



Tim Tawney meets with Roberto Battiston. Credit: Anne Rittgers



ECMIN Preston with Dr. Mauro Di Vita and Dr. Oscar Nava. Credit: Joshua Lawrence

Embassy Rome Economic Minister Counselor Preston Visits Naples:

On December 15–16, Economic Minister Counselor (ECMIN) Jean Preston made her first official visit to Naples. In addition to a valuable series of meetings on economic topics, Consulate Naples' Economic Section arranged for her to visit the INGV's Vesuvius Observatory, the world's oldest volcanology and seismic research center. The Observatory's staff has been working closely with American research laboratories since the mid-eighteen hundreds. Observatory Museum Director Dr. Mauro Di Vita noted he published a study in [*Nature*](#) last August which draws on the historical, archaeological, and geological record of the Neapolitan Campi Flegrei ("burning fields") caldera to help explain how magma has been transferred from the magma reservoir below to the surface before eruptions take place. Some of Dr. Di Vita's INGV colleagues published in *Nature* in December a study of the [*Campi Flegrei*](#), which found that the caldera is nearing a critical point at which decreased pressure on rising magma triggers a release of gas and fluid. While the magma may then harden and cease its upward motion, in other circumstances, it could potentially lead to an eruption, so the monitoring carried out by INGV remains critical.

National Parks

Foreign Commercial Service in Italy Celebrates the National Park Centennial

On November 16, Foreign Commercial Service (FCS) Italy collaborated with BrandUSA to celebrate the centennial of the National Parks system and promote U.S. tourism. FCS tapped ESTH and other embassy sections to help fill the Ambassador's residential theater and treat the audience to a 3D documentary, "American Wild", narrated by Robert Redford. The film follows three travelers on their athletic adventures on a U.S. National Park trip, where they do everything from dirt biking in Utah's Arches National Park to climbing Redwoods in California. The film features several scenes from Yellowstone National Park, which Congress established in 1872 in the then-territory of Wyoming, which preceded the creation of the National Park Service in 1916.

Italian arrivals to the United States increased dramatically from 839,000 in 2013 to over one million in 2015. This represents a jump of almost 25% despite the sluggish growth of the Italian economy and a strong dollar. This all-time record of Italian arrivals to the U.S. accounted for over 3 billion in tourism dollars. In fact, according to the U.S. Department of Commerce, every 65 visitors to the United States create one new job. In further positive news in Italy-U.S. travel, the



Alaskan Anne Rittgers and Wyomingite Caron De Mars display the parks found in their home states. Credit: Dawn Bruno

Department of Homeland Security announced in November 2016 that Rome Fiumicino and Milan Malpensa had been selected as priority locations for preclearance expansion. If preclearance operations are expanded, travelers will undergo immigration, customs, and agriculture inspection by U.S. Customs and Border Protection before boarding a flight in Italy bound for the United States rather than upon arrival, resulting in significant time savings.



Ambassador Phillips opened his residence to the enthusiastic audience for a reception after the documentary, to further promote U.S. tourism to Italians. Brand USA distributed coffee table books featuring the spectacular parks portrayed in the film.



Ambassador Phillips makes opening remarks before the screening event. Credit: Caron De Mars

Milan: Working to Keep Clean Air Despite the Challenge of Geography

Air-quality-monitoring results show that Milan regularly exceeds the EU's 2008 Ambient Air Quality Directive, due to high levels of nitrogen dioxide and particulate matter. January 2017 was an especially difficult month for air pollution in Milan, with poor visibility and high particulate matter during a majority of the days of the month. According to the EU, traffic emissions, biomass burning for heating and industry, and the challenges of geography are the largest contributors to air pollution in Milan. The city sits in the Po Valley, surrounded by the Alps, which trap pollution in the valley. Local measures to limit emissions have included traffic restrictions, the installation of emission-absorbing asphalt, free public transportation for children, and making available unlimited metro cards for a nominal fee. These tactics are starting to work, and there have been improvements in air quality. While progress continues to be made, Milan's biggest obstacle is its unique geography.



*A cyclist rides his bike with free reign during the traffic restriction.
Credit: Alexandra Teisan*



Milan's Duomo Cathedral is barely visible through smog that hovers over the city. Credit: Alexandra Teisan

Paris Agreement Ratification

According to a [press release](#) from ItalyUN.it, the Italian Parliament ratified the Paris Climate Agreement on October 27, 2016. Italy then deposited its instrument of ratification on November 11, the day after the ratification document was published in the Official Gazette. The document also provides for funding for international cooperation on climate change.



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

Paris Agreement logo. Credit: UN.org

A U.S.-EU Panel promotes Cooperation under the Horizon 2020 Program

On October 17, 2016, U.S. Ambassador to the European Union Anthony Gardner, and European Commissioner for Research and Innovation Carlos Moedas signed an Implementing Arrangement between the U.S. government and the European Commission to enhance transatlantic cooperation on science, technology, and innovation. Horizon 2020 is the biggest EU research and innovation program that promises breakthroughs and discoveries throughout Europe. On January 10, 2017 the Office of Science and Technology Cooperation hosted an outreach event at the State Department to discuss partnership opportunities under the newly signed Implementing Arrangement between the United States and the EU. The panel said the agreement was a great step towards better working relations for both sides. The goal is to simplify cooperation and create new partnerships among researchers to bring lab ideas to the market. One of the key



points to the agreement is that each research partner complies with the respective rules and regulations of his/her funding organization, since

U.S. organizations who do not receive EU grants generally do not work under the Horizon 2020 Grant Agreement. For more information, click [here](#).



*USEU Ambassador Anthony Gardner and European Commissioner Carlos Moedas presenting the Arrangement, and USEU Ambassador Anthony Gardner and European Commissioner Carlos Moedas signing the Arrangement.
Credit: Ec.Europa.eu, Sophie Coremans*

On the Trail of Glaciers

ESTH Intern Anne Rittgers attended a screening and discussion of the film On The Trail of Glaciers at Enel (Italian multinational distributor of energy) on Wednesday, December 7. Click [here](#) to view the trailer.



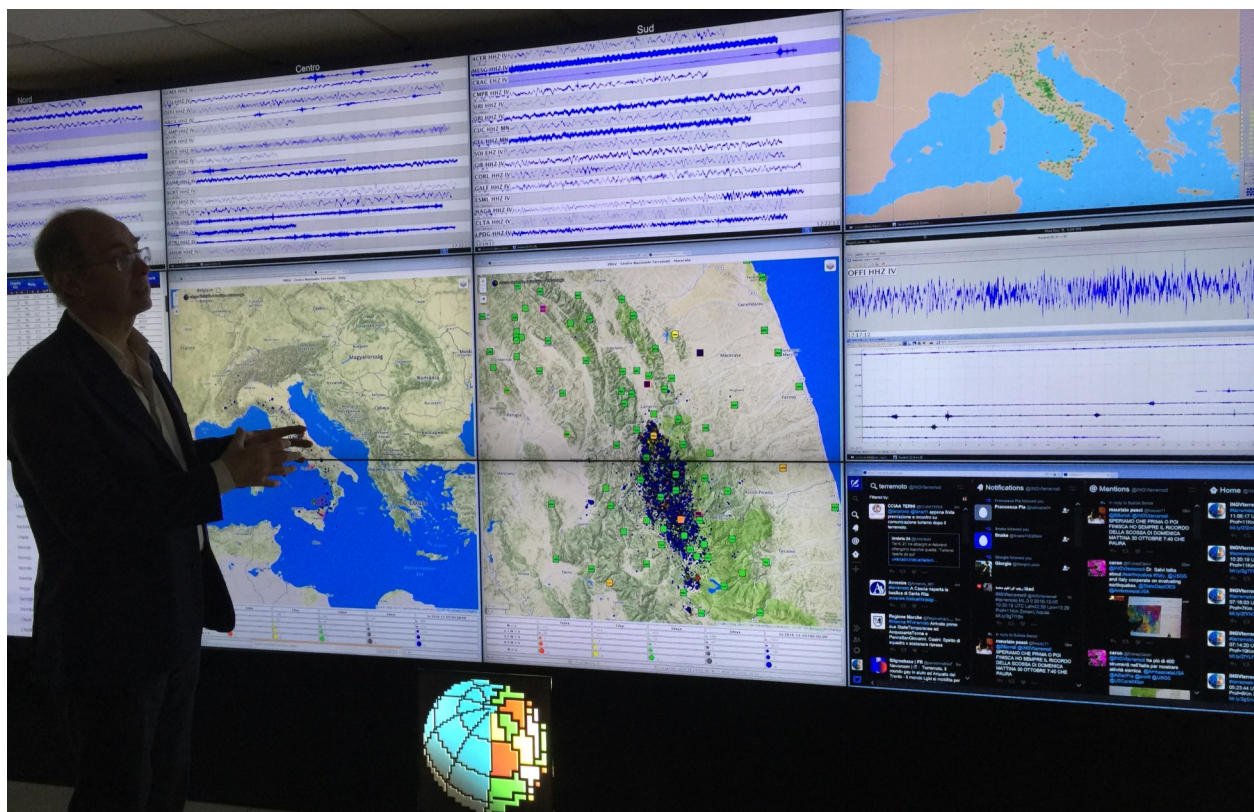
Fabiano Ventura talks his photos of receding Alaskan glaciers. Credit : Anne Rittgers

Rome's Science Diplomats Tour Italy's National Institute of Geophysics and Volcanology

Science Attachés from more than a dozen diplomatic missions in Rome met at Italy's National Institute of Geophysics and Volcanology (INGV) on December 5. Italian scientists demonstrated the equipment and explained the methods they use in monitoring volcanic and seismic phenomena, in addition to a tsunami warning system. Three of Italy's volcanoes have erupted in the last hundred years and are still active: Mount Etna, on Sicily; Stromboli, on one of the Aeolian Islands; and Mount Vesuvius, near Naples. Vesuvius last erupted in 1944, and is the only active volcano in mainland Europe. INGV has over 400 seismic instruments and 180 global positioning system (GPS) receivers in Italy. This data acquisition system was designed to detect earthquakes' magnitude and epicenter, and then feed data into "shake maps". This

system gathers data on all tremors exceeding 2.5, and in 2014 detected 27,000 earthquakes in Italy. In nearly 800 of the more severe instances, the civil authorities sent notifications via phone, email, SMS, and published data in quasi real-time on the web and on social networks.

The U.S. and Italian government scientific agencies share data and cooperate closely. Both U.S. Geological Survey (USGS) and NASA have traded data and satellite imagery after earthquakes in Italy and the United States. NASA's Jet Propulsion Lab (at the California Institute of Technology), the Italian Space Agency, and INGV share data from Earth observation satellites and programs to produce geospatial proxy maps for disaster management and to pinpoint undiscovered geographical disaster areas in remote locations.



Map displaying seismic activity, real time and historical data, Twitter feed, and GPS locations. Credit: Caron De Mars

Arctic Conference in Rome

On December 5, the ESTH team participated in a conference in Rome on international cooperation in the Arctic titled “The Future of the Arctic: Geopolitical, Environmental, and Economic Perspectives.” The Royal Norwegian Embassy, Arctic Frontiers, Istituto Affari Internazionali and the National Research Council (CNR) collaborated to organize the conference. Over 100 participants listened to two distinguished panels. The first panel focused on policy and research in the Arctic, featuring topics from the Arctic Council to Italian researchers in the Arctic. The second panel focused on responsible business in the Arctic, with an emphasis on energy, shipping, and technology industries. To conclude, conference



Aurora Borealis. Credit: NASA Goddard Space Flight Center

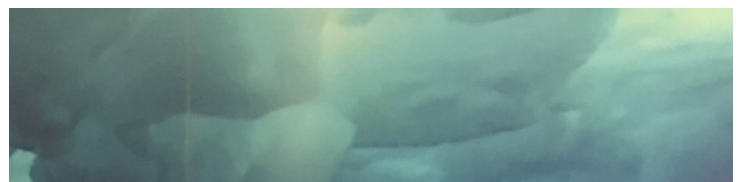
participants enjoyed an exhibit from the Norwegian Polar Institute titled: “On Thin Ice.”

An Observer of the Arctic Council since 2013, Italy has a vested interest in Arctic issues, especially regarding climate change research and sustainable economic development. CNR Director of Earth and Environment Sciences Enrico Brugnoli presented the results of a climate research project, funded by the Italian Ministry of Education, Universities and Research, and carried out by several Italian institutes and universities. The project supported an international scientific drilling campaign, and tested new technologies for improving the study of air-sea-ice interaction. Brugnoli stressed that Polar (Arctic and Antarctic) Science should remain one of Italy’s national research priorities.



*Above, ESTH Fall '16 Intern Anne Rittgers at the “On Thin Ice” exhibition
Credit: Federica Signoretti*

Right, photo of a panel in the exhibit. Credit: Anne Rittgers.



G7 Ministerial Preparations



ESTH Team Joins Health G7 Ministerial Working Group

U.S. health experts from Health and Human Services (HHS; the Office of Global

Affairs and the Food and Drug Administration), U.S. Agency for International Development (USAID), and the Department of State came to Rome on January 20 for the first meeting on the G7 health track, to discuss potential areas of focus for the G7 Health Ministerial in Milan, November 5–6. Italy selected the theme of “planetary health”, which takes a holistic approach to the relationship between human, animal and environmental health in relation to climate. The U.S. team offered ideas to promote capacity building and greater data sharing for better forecasting of weather-related impacts on health; to help identify and highlight best practices for emergency action plans and health system resilience; and to curb antimicrobial resistance, among other actions.



(From L to R) U.S. delegation to the G7 Health Communicate working group. Joshua Glasser (State), Aye Aye Thwin (USAID), Federica Signoretti and Caron De Mars (ESTH), and Peter Schmeissner (HHS). Credit: Colin Mciff

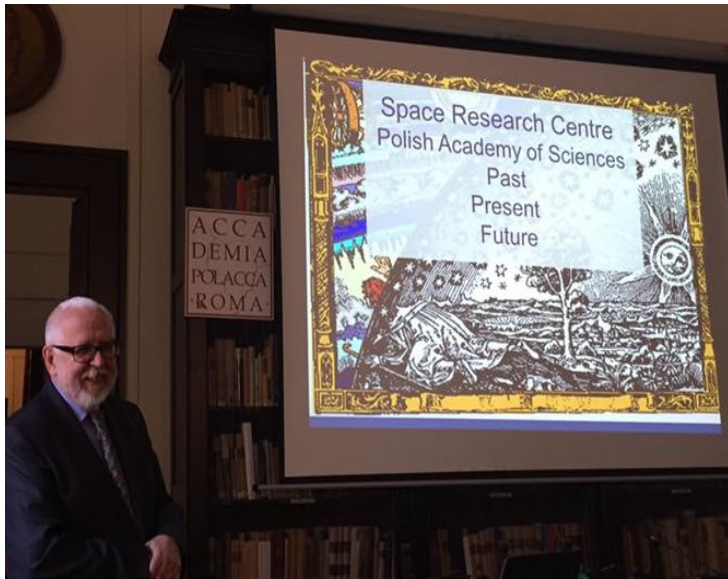


(From L to R) Federica Signoretti, Hodayah Finman, Kristin Williams, and Caron De Mars at the G7 Environmental Communicate working group. Credit: Nathalie Nikitenko

Italy's Environment Ministry hosts G7 Representatives

The ESTH team participated in the G7 Environmental Communicate working group in Rome on January 30. U.S. Environmental Protection Agency (EPA) Senior Adviser Hodayah Finman led the discussion on behalf of the United States. The Italian Environment Ministry has organized an extensive meeting schedule around Europe, including two-day sessions to discuss eight priority areas, ranging from carbon markets to green financial centers. Since one of those eight priority areas is reducing marine litter, ESTH Counselor Caron De Mars thanked the EU representatives present for paying for translation services for a traveling museum-quality marine plastic exhibit supported by five different U.S. embassies in Europe. Although the plastic exhibit will be in Portugal during the Environmental Ministerial in Bologna June 11–12, ESTH will work with the Italian Fisheries Directorate on an exemplar of the exhibit to display in Bologna that would publicize the cooperation between Europe, Italy, and the United States on this important issue. The Italian chair asked each G7 government to invite three of the country's top universities to attend a side event during the Environmental Ministerial in Bologna. Italy also intends to invite three environmental ministers from Africa, one from Asia, and one from Latin America to attend parts of the ministerial.

Recent Activities



*Professor Jan Błęcki delivers a lecture at the Polish Academy of Science on November 28th, for Rome's Science Diplomacy Club.
Credit Caron De Mars*

Poland's Space Agency presentation at Rome's Science Diplomacy Club

Rome's Science Diplomacy Club, including the Embassy ESTH team, met on Monday, November 28 at the Polish Academy of Science, which has had a presence in Rome for 75 years. The lecture, delivered by Professor Jan Błęcki from the Space Research Center of the Polish Academy of Sciences, highlighted the main research interests of the Center, which has been active in the European Space Agency (ESA) for four years. (Italian space agency ASI has been in ESA since ESA's creation 40 years ago.) The mission of the Space Research Center is space sciences development, near-space and Earth monitoring, space instrument development, and delivering high space technology to industry and market. The lecture covered the past, present, and future of projects at the agency related to this mission.



Driftnet Fishing

The International Commission for the Conservation of Atlantic Tunas (ICCAT) is an inter-governmental fisheries organization responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas. The international nongovernmental organization Blackfish suggested that three Italian vessels may have violated ICCAT measures aimed at combatting illegal driftnet fishing in 2014 or 2015. In response, The Italian government indicated these vessels were inspected and sanctioned where appropriate. Additionally, the Italian government described a July 2016 Ministerial Decree that entered into force in September 2016, which addresses these concerns. The U.S. National Marine Fisheries Service (NMFS) informed the Italian government on January 19 that Italy has not been identified as a country in violation of the U.S. High Seas Driftnet Fishing Moratorium Protection Act, and noted that NMFS looks forward to continued cooperation with Italian authorities on fisheries issues.

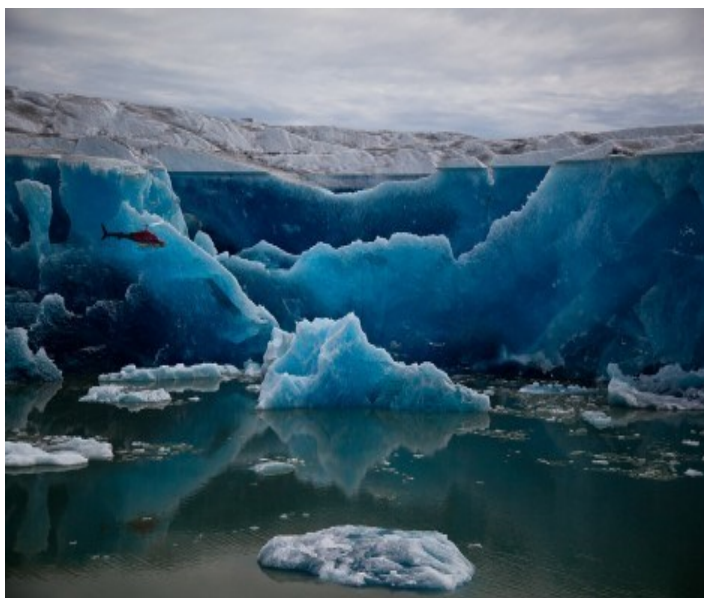


Embassy Activities



Movie Night

Rome's Tri-Mission Green Team hosted a screening of "Our Rising Oceans" on December 19. Deputy Chief of Mission Kelly Degnan delivered opening remarks. Before the film, Green Team members provided refreshments and gave tips on recycling on the Tri-Mission compound. This documentary features panoramic shots of Antarctica and its eroding glaciers, and was one of eight films shown at the "Our Ocean" conference in Washington, D.C. last September. The Green Team was pleased with the support and participation from Tri-Mission staff, and greatly appreciated the technical audio-visual skills of the Public Affairs Section.



NASA Images of Antarctica. Credit: NASA.gov



ESTH team in action: Michael (Lee) Lee, Caron De Mars, Kristin Williams, and Federica Signoretti tag the reusable bags. Credit: Rosa Alterio

Bag It!

The Green Team held a drive to collect reusable grocery bags, which have been donated to the Navy Exchange (NEX) Commissary on the Tri-Mission compound. The goal is to incentivize NEX customers to ask for reusable bags and bring them back from home, to cut down on the use of single-use plastic bags dispensed at the NEX. After the initiative started, some NEX customers forgot to return the bags for future use by other customers, so Science Affairs Specialist Dr. Federica Signoretti created tags for the bags to give a friendly reminder to customers to bring back the borrowed bags to the embassy for others to use. During the ESTH-ECON welcome party for winter intern Kristin Williams, the ESTH team tagged all the donated bags and took them to the NEX. This is just one of the many projects that the Tri-Mission Green Team has undertaken to bring more environmental awareness to the Tri-Mission compound.

Fall Intern Review

Anne Rittgers: Fall Internship Experience

The suggested packing list for my internship in U.S. Embassy Rome contained one unnecessary item: there was no need for an alarm clock on my first morning in Italy. The largest earthquake to hit central Italy in 30 years (magnitude 6.6) shook me awake, a “welcome” that lasted 120 seconds. This place is not so different from Alaska, I thought, during that two-minute eternity.

As a graduate student pursuing an MA Degree in Arctic and Northern Studies at the University of Alaska Fairbanks I arrived in Rome in the autumn of 2016 to be a State Department intern in the Environment, Science, Technology and Health (ESTH) Section. While I was here, most folks seemed perplexed when I mentioned that I was studying the Arctic during my internship in Rome. In a place that barely gets below 40F, my choice of study seemed rather incongruous to many. However, after two months in the Eternal City, it was clear that Arctic interconnections are real and relevant; in fact, Rome’s ESTH section portfolio specifically identifies the Arctic as a main focus.

My days as an intern were filled with exciting, hands-on work, relevant to my degree and interest in the Foreign Service, including but not limited to: writing my first cable; designing and publishing the premiere ESTH section newsletter; participating in the Embassy’s Green Team; and updating economic statistics sheets. I sought out ways to incorporate an Arctic angle into my work. As an Arctic Council observer nation, Italy considers the Arctic Council the primary international forum for discussing the Arctic and contributes predominantly through engagement at the working group level, thanks to its sophisticated scientific community. The Italian government actively seeks to increase scientific collaboration, promote sustainable development, protect indigenous populations, and raise public awareness in the Arctic.

As the U.S. plans to hand over the two-year, rotating Chairmanship of the Arctic Council to Finland during the Arctic Council’s May 2017 Ministerial in my home city of Fairbanks, Alaska, I leave this internship with an increased appreciation for the wide variety of interest and high level of activity of Arctic stakeholders around the world, and the important role of the State Department in these dialogues. I’m grateful to the State Department for offering such interesting internship opportunities for students, and to my supervisor, ESTH Counselor Caron De Mars, and the ESTH team for structuring an engaging intern workload.

When I return to Alaska in January, some differences with Rome will be stark. For starters, the days will be much shorter and colder. And the food, well let’s just say the food will be a little different back home in Alaska than what I had gotten used to in Rome. Along with some profound cultural insights, the unforgettable artistic experiences, and the warm friendships I encountered while in Rome, my internship reminded me that despite our many differences, ties of global interest and interconnectedness bind the Arctic to the rest of the world.

Look Ahead: 2017 Calendar

Feb. 27–March 1	United States Geological Survey (USGS) visit to Italy
March 3	World Wildlife Day
March 14–15	G7 Meeting on Environmental Subsidies (Rome)
March 22	World Water Day
April 5–6	G7 Meeting on Green Finance Small & Medium Enterprises (Venice)
April 9–10	G7 Energy Ministerial (Rome)
April 12	International Day of Human Space Flight
April 20–21	G7 Meeting on Marine Litter (Rome)
April 22	Earth Day
April 24–30	World Immunization Week
April 28–30	NASA Space App Challenge
May 3	G7 Environmental Communique Working Group Meeting (Siena)
May 11	Arctic Council Ministerial (Fairbanks, Alaska)
June 8	World Oceans Day
June 10–11	G7 Environment Ministerial (Bologna)
Sept. 16	International Coastal Cleanup Day
Sept. 26–27	G7 Information Communications Technology Ministerial (Turin)
Sept. 28–29	G7 Science Ministerial (Turin)
Oct. 5–6	Our Ocean Conference (Malta)
Oct. 24	World Polio Day
Nov. 5–6	G7 Health Ministerial (Milan)
Nov. 13–19	Education Week and Global Entrepreneurship Week

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